

From a diversity of stakeholders' representations to a complex model of ecosystem services

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Ecosystem services are a concept widely used by ecologists and environmental scientists, but which requires transdisciplinary skills. In order to study the services (beneficiaries needs) and not only the functions (potential to deliver services) of the ecosystem, an approach based on socio-ecological systems is needed to fill the gap between the demand and the supply of ecosystem services. Therefore our approach divides the system into two sub-systems: the human sub-system where stakeholders land management decisions are taken and are affected or not by ecosystem services, and the ecological sub-system where ecosystem functions are modified by land management and external drivers (climate, policy, markets). Using semi-structured individual interviews with experts and a focus group with local beneficiaries, we studied the representations (which, where, whom) of biodiversity and ecosystem services of mountain grasslands and the diversity of uses and values. The next step will be to study the spatio-temporal dynamics of ecosystem services due to land management change under different scenarios. This step could be carried out by a role playing game tool in conjunction with a modelling approach.